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FOREST LOGGING/PULPWOOD/FORESTRY/LUMBER/PANELS INDUSTRIES

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PANEL
REVIEW



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Low prices, mill closures represent dark clouds on structural panel horizon. Particleboard, hardwood plywood groups certify HUD formaldehyde compliance

Another record year for structural panels

Atlanta, Georgia

Panel industry performance in the United States in 1983 was dominated by the structural panel segment of the industry, which for the second consecutive year set a production record.

The record of 21.968 billion ft² (¾-in. basis) should stand at least through 1985, however. Forecasters see production easing to 21.6 billion ft², paralleling a moderation in housing starts this year. The 1984 record was 5.5% above 1983 production.

Three of the four other panel categories in this review also recorded production gains last year over 1983. The table below shows a 10-year history. In summary:

- Particleboard, an estimated 3.1 billion ft² (¾-in. basis), ahead of 1983 by 6.2%. The production record of 3.7 billion ft² was set in 1978.
- Medium density fiberboard, an estimated 650 million ft² (¾-in. basis), up 7.4% from 1983. This is a new record.
- Hardwood plywood, an estimated 1.3 billion ft² (surface measure), a gain of 0.8% from 1983.
- Hardboard, 6.8 billion ft² (¾-in. basis), down 6.4% from 1983.

Estimates were provided by major trade associations where calculations of 1984 production were not yet complete.

Despite the increases and records,

performance of domestic panel producers in 1984 reflected a moderation of the sharp production jump which took place in 1983. When the industry leaped out of the wood products recession in 1983, it turned in production levels ranging from 22% to 31% above 1982 marks in the five product categories.

Structural panels

If 1984 was another record production year, it also was the year of the so-called "profitless boom." An industry burdened by excess capacity found it difficult to recapture raw material and manufacturing costs at the low product prices forced by a surplus of production.

Thus in late months of the year and early in 1985, news of plant closures began cropping up, mostly in the West where high timber, labor and transportation costs relative to other regions put many installations firmly into the red. With the remaining mills producing at high rates of capacity, however, prices have not firmed.

The structural panel category is composed of the traditional softwood plywood plus the new kids on the block, non-veneered panels (waferboard and oriented strand board, mainly), which share performance standards and applications. Of 1984's nearly 22 billion ft² total, plywood accounted for just over 20

billion and non-veneered panels just under 2 billion.

The main thrust behind 1984 production was housing, observed American Plywood Assn. president William T. Robison. At 1.745 million units, housing starts were up 2.4% from 1983. Demand in other basic panel markets has also remained strong, Robison said.

Last year, panel use in housing increased 6% from 1983, contributing to a 41% share of the panel market. The remaining 59% of structural panel output went into non-housing markets: repair and remodeling, non-residential building, industrial uses and exports.

In 1985, look for a good first half and a downturn later, according to Robert G. Anderson, APA's director of market research and economic services. "Going into 1985, we had an excellent platform. Interest rates were down and mortgage rates were expected to moderate a bit further. The attitude is positive at both the builder and distribution level. Optimism for 1985 is solid."

Problems should surface later in the year, Anderson warned, as a continuing federal budget deficit puts the squeeze on credit.

The APA is forecasting 1.65 million housing starts and structural panel demand of 21.6 billion ft² in 1985. "Other markets will not quite offset the drop in

TABLE 1—U.S. Panel Production, 1974-1984
(thousand ft²)

Year	Structural panels (¾-in. basis)	Particleboard (¾-in. basis)	Hardboard (¾-in. basis)	MDF (¾-in. basis)	Hardwood plywood (S.F. basis measure)
1974	15,873,381	3,103,800	6,058,542	—	1,884,243
1975	16,030,160	2,534,954	5,231,906	215,496	1,379,082
1976	19,440,000	3,204,325	7,388,022	280,036	1,434,115
1977	19,378,000	3,582,910	7,200,000	441,304	1,778,000
1978	19,564,000	3,720,266	7,300,000	508,416	1,480,071
1979	19,853,000	3,316,485	7,587,736	506,735	1,434,071
1980	18,404,000	2,848,887	3,140,070	493,140	1,213,760
1981	17,023,000	2,585,352	5,104,000	514,102	1,370,000
1982	18,002,854	2,901,085	5,588,918	448,107	1,382,000
1983	20,321,342	2,970,344	7,302,702	608,095	1,380,000
1984	21,968,017	3,100,000 (est.)	6,837,110	640,000 (est.)	1,300,000 (est.)

housing," Anderson noted, "although they will come close. Exports will be better. Non-residential construction will be as good, with increased promotion offering hope for more volume. Repair and remodeling will be up and industrial uses about equal with 1984."

Anderson suggested higher interest rates could push housing down to the 1.4 to 1.45 million range in 1986. However, an undersupplied housing market will create another demand surge by 1990, accompanied by increases in non-residential building and exports.

APA's promotion plan through 1989 has the goal of adding 4.5 billion ft² of new demand, which Robison termed "a conservative assessment of the new business that can be won largely at the expense of our industry's non-wood competitors."

"It's the amount of new demand we feel realistically can be added with the funds and manpower available to the industry over the next few years," Robison said.

Formaldehyde developments

Efforts of particleboard and hardwood plywood manufacturers have been focused on compliance with U.S. Department of Housing and Urban Development regulations, which as of Feb. 11, 1985, govern formaldehyde emissions in manufactured homes.

The Hardwood Plywood Manufacturers Assn. has devised formaldehyde emission inspection and property verification programs for hardwood plywood wall paneling housing and unfinished industrial panels.

"HPMA's laboratory in Reston, Va., carries out the two-hour desiccator test and the large-scale chamber test," described president Clark E. McDonald. "Seventeen inspectors conduct formaldehyde inspections at an average frequency of four times per month, except where production is less than 1.5 million ft³ per month, in which case the average frequency is one inspection per month."

National Particleboard Assn. is serving as a grademark agency to certify compliance with the HUD rule. Executive vice president William H. McCredie said 26 mills are signed up for emissions certification. Testing at the mill by NPA field representatives is backed up by lab testing of samples.

The HUD rule permits 0.3 ppm of formaldehyde at 77° F, 50% relative humidity and 50% air change per hour. Figures are calculated at a loading ratio of 1.3 ft² of product per ft³ of air, basically the floor area of a manufactured home cube.

About 10% of particleboard ends up in manufactured homes, McCredie said, but many mills are certifying all prod-

Waferboard paces Canadian industry

VANCOUVER, B.C.—Canada's panel industry had a mixed year in 1984, with the big news another spectacular leap in waferboard output which pushed the figure beyond one million cubic meters for the first time.

Particleboard production also moved upward, while softwood plywood and hardboard figures declined. (Canadian statisticians do not mingle waferboard and OSB with structural plywood as do U.S. industry sources, but OSB is combined with waferboard.)

Here are the 1984 production numbers provided by Statistics Canada (one cubic meter equals 35.3 cubic feet):

- Waferboard, 1,190,254 m³, a gain of 37.8%.
- Particleboard, 843,346 m³, increasing 17.5%.
- Softwood plywood, 1,846,369 m³, a decline of 10.5% from 1983.
- Hardboard, 160,855 m³, down 5.6%.

The increase in waferboard production came atop a 1983 jump of 75% over the year before. Output was 492,447 m³

in 1982 and 863,442 m³ in 1983.

The softwood plywood drop in 1984 reversed a substantial 23% increase recorded in 1983.

Most Canadian softwood plywood is made in British Columbia, where mills operated at about 90% of capacity in 1984. Production declined by 12% to 1.754 billion ft² (¾-in. basis), according to the Council of Forest Industries of British Columbia.

COFI blamed a sharp reduction in Canadian housing starts, the strength of the Canadian dollar internationally and a period of intermittent, labor-related production curtailments.

"However, 1984 production is still substantially above the extreme low of 1982," said Art Kempthorne, plywood sector manager for COFI. "Mills have made major improvements in production technology and productivity."

B.C. plywood exports to Europe increased last year. Higher export volumes to Japan and other new market areas were scored, and the B.C. industry is studying opportunities in China. ■

ucts through the HUD standard so they and component makers can avoid maintaining a dual inventory.

Hardwood plywood

HPMA's laboratory last year carried out 933 formaldehyde desiccator tests and 153 formaldehyde chamber tests. The lab also conducted 668 Type II interior glue bond tests, 577 ASTM E-84 25-ft tunnel furnace flamespread tests, 43 ASTM E-162 radiant panel flamespread tests, 22 ASTM E-648 flooring radiant panel tests, and 47 ASTM E-662 smoke analyses.

To promote exports, HPMA will join four other hardwood associations in an exhibit at Interzum, the biennial furniture show in Cologne, West Germany, May 8-14 and will publish a German language edition of the 1985 HPMA directory. HPMA will also take a group of its members to Tokyo Nov. 18-20 for the 9th Asian Plywood Manufacturers Conference, followed by a plywood and veneer mill study tour in Indonesia.

The HPMA staff chief explained the domestic industry's concern about hardwood plywood imports. Japan, the largest exporter of hardwood plywood to the U.S. 25 years ago, and Korea, which held that position 15 years ago, both depended on logs imported from the Philippines, Indonesia and other countries on the Pacific Rim.

"Within the last five years, Indonesia has become the largest hardwood ply-

wood exporter to the U.S. In 1980 they had 29 hardwood plywood mills with an installed capacity of 1,949,000 m³ (two shifts). In 1984 they had 95 hardwood plywood mills with an installed capacity of 5,327,600 m³, McDonald said.

"In 1985 they will have 198 hardwood plywood mills with an installed capacity of 5,830,000 m³. The Indonesian Wood Panel Assn. (APKINDO) estimates 1985 production at 4,081,000 m³, domestic sales of 756,000 m³ and exports of 3,325,000 m³.

"Indonesia has imported no hardwood plywood since 1980, and their government will not allow logs to be exported. Taiwan has been the big exporter of door skins to the U.S.; however, Taiwan does not have a hardwood forest resource. Indonesia has begun to manufacture door skins and will probably become the principal supplier of skins to the American flush door industry."

Particleboard and MDF

McCredie described cabinet and furniture markets as strong. These and other industrial uses account for about 70% of particleboard production. "This helps isolate us from the general doldrums of the construction marketplace," he said. NPA will be emphasizing further promotion to these markets.

Basically, he summarized, order files are looking good and manufacturers expect 1985 performance similar to 1984 levels. ■